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Medical Fashions

Edw. T. Tibbits.

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MEDICAL FASHIONS.

MEDICAL FASHIONS

IN THE

NINETEENTH CENTURY

INCLUDING A SKETCH OF

BACTERIO-MANIA AND THE BATTLE OF THE BACILLI

BY

EDWARD T. TIBBITS, M.D., LOND.

PHYSICIAN TO THE BRADFORD INFIRMARY; AND TO THE BRADFORD FEVER HOSPITAL: FORMERLY HOUSE PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, LONDON; AND CLINICAL ASSISTANT TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, LONDON.

LONDON
H. K. LEWIS, 136 GOWER STREET W.C.
1884

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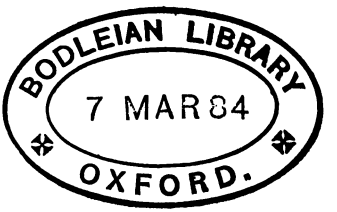
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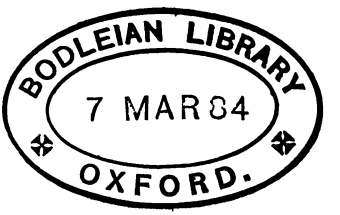
MEDICAL FASHIONS.

INTRODUCTION.

It is now considerably more than a quarter of a century since I first entered the portals of the medical profession. During that time the art of healing has undergone numerous, some of them very remarkable changes. Theory has displaced theory, this remedy has supplanted that, and one method of practice has been entirely superseded by another. Some so-called improvements have proved to be simply changes in the cycle of fashion, and nothing more, and thus I presume it always will be.

We medical men of the present day are apt to flatter ourselves, that, compared with our great grandfathers who practised before us, we are vastly superior both in knowledge and practice. And although there is abundant reason to be thankful that medical education and skill have been, and still are progressive, it is just within the range of possibility that something may be said in favour of the antiquated, and now, alas! too much despised practice of our predecessors.

To-day is the day of novelty and fashion, and in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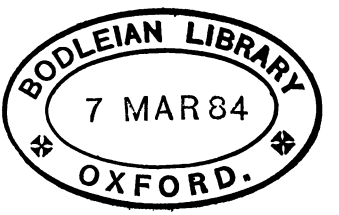
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the following pages I shall endeavour to point out the necessity for more patient thought and corroborative testimony on matters medical and scientific before taking action thereon. It is not advisable to embrace every new theory with eagerness, because it happens to be encircled with a halo of plausibility, or even because it is supported by a certain, it may be a considerable, amount of circumstantial evidence.

In these days there is danger of precipitate legislation on sanitary and social affairs. It is even possible to be fettered by too many laws, and this is a fact, at any rate worthy of consideration. I do not for one moment question the expediency of framing laws for the preservation of health, or for the well being of man in society, but except under specially urgent circumstances, hasty legislation in the directions to which I have alluded is anything but beneficial, and too frequently mischievous.

It is my intention shortly to publish a little work entitled "Mores Medici" with the object of explaining in detail, how and why medical men differ so widely in their opinions and practice. That they do so differ is undeniable. Their opinions are as numerous as the various shades of the prismatic colours, and sometimes as diametrically opposed as light and darkness, or the north and south poles. But this difference of

opinion is neither peculiar to, nor characteristic of the doctors. It obtains in all other classes and sections of human beings, and is the result of several factors, amongst which may be enumerated for the sake of example, social position, education, manners, customs, fashions, morals, and general character. To most of these I hope to direct special attention at a future period. In the meantime I have ventured to select one out of the list, *viz.*, fashion, as the basis for a preliminary pamphlet, which will I trust be the means of ventilating more thoroughly some of the ideas therein contained. Many are more or less familiar to the public.

My views concerning some of them are not, medically speaking, quite orthodox, in fact, they are not fashionable. However, it is satisfactory to know that some, perhaps many, of my professional brethren entertain similar notions. I would respectfully ask the reader to consider what I have written without prejudice, and so draw his own conclusions. Although I candidly confess that I am to a certain extent biassed against frequent changes without very good cause, the explanation for such a state of mind will partly be found in the accompanying description of numerous facts about which there can be no dispute.

FASHION IN GENERAL.

Novelty is not necessarily associated with progress or improvement. Indeed in many instances it is precisely the reverse. In these days when competition is running very high, there is a general tendency to engage the attention of the public by a novelty whether it be in the matter of religion, science, education, dress, medicine, or anything else. That all novelties are more or less attractive, is a fact which cannot be denied. That they are frequently worthless, if not injurious, is another fact quite as unassailable. Many of these novelties may be justly regarded as envelopes, tempting in form and colour and general appearance, disclosing when opened, perhaps nothing more than some well known object, the imperfections of which it has been thought desirable to disguise or conceal. Before entering into the special subject of "medical fashions" it will be as well to consider briefly what is understood by fashion. It is not rule, neither is it exactly custom. A rule is made for our guidance, without which, although not absolutely binding, it would be almost impossible to transact the business of every day life in a satisfactory manner. Custom is less binding than rule, but observed and scrupulously observed for long periods by large masses

of individuals in different localities, communities and nations.

Speaking generally there is usually some good reason for the observation of rules and customs prevailing in a particular district or kingdom at any given time. The same cannot possibly be said of fashion since it is often opposed to common sense and reason. It gives rise to appearances and manners of the most ridiculous and grotesque description. As regards dress, in many instances, it is decidedly unbecoming as well as uncomfortable, inconvenient, and even injurious to health. The fashionable but horrible high-heeled boots, artificial waists and crinolettes, constitute a combination, which, to say the least, distorts, disfigures, and detracts from the natural grace and elegance of the female figure.

The same remarks are quite as appropriate, taken in connection with the education of the period, especially that which concerns girls. Physiology and Zoology are in these enlightened days considered suitable subjects for cramming into the minds of our girls. I will not stop to consider the numerous arguments which might be brought forward against this kind of instruction, but if it is to be anything more than a farce, it must be associated with the dissection of animals, a very nice accomplishment forsooth for our daughters! Is it calculated to make them better

wives or mothers? Studies and occupations of such a nature must have a tendency to uproot tenderness, delicacy, and refinement, in fact all the attractive and prominent qualities of the natural womanly character. Without any great stretch of the imagination they may be aptly described as the high-heeled boots and crinolettes of female education, and as such they are distorting, and inelegant, if not actually mischievous.

"Fashion" as ordinarily observed in the matter of dress, etiquette, manners, etc., is a novelty, or perhaps an apparent novelty, which has arisen from some trivial or accidental circumstance, or from the act, foolish or otherwise, of an individual of high rank or eminence. Indeed instances are recorded in which it has taken its origin from some act of infamy, or even a notorious crime. As one illustration may be mentioned the once fashionable hat for gentlemen known as the Müller hat in honour of the murderer of Mr. Briggs. Some fashions it is true, are hailed and justly so with intense satisfaction by every one, yet it must be noted at the same time that there are many others the only recommendation of which is their novelty. Here I will venture to quote a passage from the quaint writings of Abraham Tucker, Esq., "therefore the recommendation of fashion is not, that it is the prettiest, the neatest, the most commodious, or the

most useful, but the newest adopted by persons of highest rank in the place. Yet is not fashion, without its uses and those no contemptible ones; it furnishes some persons with the whole employment of their time, thereby rescuing them from that most forlorn condition of the having absolutely nothing to do. Nay, perhaps we plodding folks might plod on to our mischief like a hen that would sit still till she starves herself were we not forced off our nests by some necessary compliances with the mode."*

MEDICAL FASHIONS.

As in dress, manners, religion, recreation, so in the scientific world there is "fashion." And it is more than probable that in no department of science is there so much "fashion" as in that of medicine Unlike other fashions the medical varieties have for the most part some scientific foundation. On looking into the subject a little more closely it will be found that what was once scientific, and confined within reasonable limits, gradually acquires an immensely inflated reputation, and finally degenerates into what can only be described as "fashionable." Having arrived at this stage, it usually meets with the same fate as many

* Light of Nature Displayed.

other fashions, falls into comparative disuse, or is totally superseded by something possessing more numerous (real or imaginary) advantages.

It must not be supposed that I can mention a tithe of all the changes and oscillations which have taken place in the methods of treating disease, or the multiplicity of ideas, pathological, etiological, or otherwise, which have prevailed at different times with various degrees of plausibility during the present century. I shall only notice a few of the most important and striking ones which will be sufficient for the purpose of illustration.

On studying the contents of the Medical Journals since the year 1800, it is not difficult to formulate from the mass of information therein contained certain propositions, the general accuracy of which I think cannot be disputed. The first of these propositions may be stated in the following terms.

I. That many valuable remedies and methods of treating disease, by reason of their too general and injudicious use, have a tendency to become, and sometimes do become highly dangerous or even positively destructive to human life, and are liable to be wholly discarded, or greatly undervalued in consequence.

The essence of this proposition must commend itself to every thoughtful member of the medical profession, and I will now proceed to give a few illustrations.

BLEEDING.

In the early part of the present century the abstraction of blood in large quantities, was practised by nearly every medical man, in all kinds of diseases. And not only so, but about this time or rather earlier, it was the fashion, in some parts of the country at any rate, to bleed twice annually, in order, according to notions then prevailing, to prevent a tendency to disease. This kind of practice I have myself seen recorded in an old Medical Day-Book dated A.D. 1750.

During that year a well known Baronet in the county of Kent, his lady, and all the servants, male and female, underwent this supposed sanitary operation of bleeding in the spring and autumn, for which the surgeon received one shilling a head on each occasion. Fearing I suppose lest there should be too much stamina remaining in the worthy old baronet and his dependants after this unnecessary attack upon their constitutions, it was considered advisable in harmony with the fashion of the day to follow up the bleeding with another reducing process, technically known as catharsis.

It requires no great flight of the imagination to conceive that this kind of thing could not be perpetrated year after year with impunity. It must

have had a tendency to produce disease and thus shorten or even destroy life.

During the first 20 or 30 years of this century so-called accidental deaths from bleeding were by no means uncommon, directly and evidently produced by the operation. There were doubtless many others indirectly connected therewith, but which, owing to the absence of a link or two in the chain of evidence, could not be incontestably proved. It is not at all unlikely that the robust and those who indulged immoderately in luxuries profited by this fashionable method of depletion. But the habit of bleeding was so general that the innocent no doubt suffered with the guilty, and the delicate and abstemious were mulcted in a fine of a few pounds of blood, and as a natural consequence a few weeks, months, or years of earthly existence. From the year 1830—1840 this operation was gradually discontinued by the majority of practitioners, and thus it has remained until the present day. As bleeding in all forms reached the fashionable and therefore the unscientific stage years ago, so now it is and has been the fashion for a long period to disparage this valuable method of treating some forms of disease. No matter what kind of case, or how clearly appropriate it may appear to be, at the present time, it is rarely if ever employed. The occasional application of a few leeches is almost

all that now remains of the old method of blood-letting. Signs, however, are not wanting of its resuscitation, and within certain limits it would doubtless be of great service, and save many valuable lives. There is no question that this is one efficient mode of treating disease which has been discarded and undervalued in consequence of its prolonged and excessive abuse.

Twenty years ago it was argued by one of the greatest medical authorities of this century—a physician who has recently passed away at the ripe age of 90 years, the late Sir T. Watson Bart., I say it was argued by this great man in explanation of the discontinuance of blood-letting that there was a "change in the type of disease," or that "constitutions had changed." I suppose the real interpretation of the matter was merely "change of fashion." And if I am not mistaken I think the venerable baronet, a few years before his death acknowledged that "fashion" was an important ingredient in this therapeutic revolution.

MERCURY.

Contemporaneous with the pernicious "fashion" of bleeding was the almost universal employment of mercury in all kinds of inflammations, and in many other diseases.

There can be no doubt that many lives were more or less shortened or even directly sacrificed by the widespread abuse of this powerful drug.

LARGE DOSES.

From the commencement of the century up to the years 1825—30 it was usual to give large, in truth gigantic, doses of medicine. And further altogether irrespective of the doses, all kinds of medicines were prescribed and administered far too liberally and too frequently. At that time medical men were accustomed to charge for every particle of medicine whether in the form of mixture, draught, powder, pill or liniment. Moreover it was not uncommon for the patient to use all the medicaments just mentioned on the same day.

Although patients did expect to pay a fee for a visit or journey, the doctor's bill consisted mainly of medicines and external applications in a variety of forms, for each of which a definite charge was made. I may mention on passing that many medical men in the present day charge a certain fee for professional advice or visit, the requisite medicine being supplied without extra payment. This is a change of fashion, but a beneficial change, in fact a step in the right direction. If it were more general it would have a tendency to raise the social position of the medical man, as well as

improve and elevate the tone of his character. It is a question whether medicines should not always be supplied by druggists in spite of some powerful arguments which have been urged against such an arrangement. But to return to gigantic doses of medicine. Dr. Elliotson, a London physician of great eminence, in a lecture delivered about 60 years ago, thus declared his mind to the embryo practitioners;—"Some give 20 drops of antimony or ipecacuanha wine, and think they do all the good. This is a sort of fiddle-faddle practice, and sufficient to make a pupil laugh at physic and physicians. Whenever medicine is necessary it is perfectly absurd to give trifling doses, it can neither do good, nor harm. If you give antimony, produce nausea; if colchicum, purge or nauseate; and if mercury, give a *few grains every hour*, not half a grain every few hours." This kind of dosing was being dogmatically taught by one of the leading metropolitan physicians to about 200 students 50 years ago. A few grains of mercury every hour! Let us digest this if we can, and not be too eager to accept all the prominent dogmas of our own time, some of which may eventually prove to be quite as ridiculous and full of error as any introduced by our forefathers. It was about this period that from 6 to 8 drachms of carbonate of iron were directed to be taken every four hours in cases of St. Vitus's dance, that is to say, roughly

speaking, nearly half a pound in one day. Giants must have existed in those days. I imagine similar wholesale doses were administered to every kind of invalid, provided he or she could be induced to swallow them. But there would not be much difficulty in this direction; because the ordinary dictates of common sense and reason are oftentimes completely overshadowed if not overwhelmed by the tyrannical fascination of fashion.

SMALL DOSES.

Homœopathy. The system involving the administration of enormous doses of medicines could not be expected to continue, since one extreme is almost invariably followed, in a comparatively short time by another of a directly opposite character. Hence when profuse bleedings, large doses of mercury, and other powerful drugs were being generally employed in the treatment of disease, the absurd doctrine of Hahnemann rose into prominence. After a period of such excesses in blood-letting and other methods of depletion, a reaction of this description might have been anticipated. Consequently there was a transition from treatment of the most active kind, to a system the essence of which was to stand by and watch the progress of the disease without special interference.

Indeed it was described by Dr. Johnstone in the year 1834 as a "meditation upon death."—M. Andral, a celebrated French physician, called it a dream of enthusiasts, or "a new agent in the hands of the charlatans." Notwithstanding all this, it was extensively patronized by the nobility and aristocracy generally in this country, simply, as I take it, because it was fashionable. The following may be taken as a specimen of the kind of doses prescribed. "A twentieth part of the decillionth of a third of a drop of the extract from the recent plant." (Belladonna). What is this but an absurd periphrastic mode of prescribing nothing?

In a discussion which took place at a meeting of one of the learned societies then existing in London, it was thought by one gentleman that this ridiculous system would ultimately be the universal creed. This notion I suppose affected directly only a comparatively small section of practitioners. Inasmuch as it was partly the means of inducing greater caution in blood-letting and the administration of violent remedies, as well as a more minute attention to diet, it produced, in spite of its manifest absurdities, a beneficial effect upon the practice of medicine. In the present day it is doubtful whether any true homœopath exists, *i.e.*, one who really believes in the action of such infinitesimal doses as that to which I have referred, and the universal doctrine of *similia similibus curantur*.

Indeed I have seen *very large* doses of medicines recommended for certain diseases in homœopathic text-books, and I suppose the other portion of the creed has not many strict adherents. True homœopaths with very few exceptions are figments of the past. The majority of them exist only in name, but endeavour to persuade the public that the name indicates the possession of some superior talent or marvellous curative power, which is denied to the great mass of medical practitioners. This I am sanguine enough to believe is slowly, too slowly indeed, but surely losing ground, and must shortly share the same fate as all other fallacies. A distinct renunciation of the homœopathic creed after something like twenty-five years experience cannot but indicate its approaching dissolution. This I happen to know has occurred in two instances in the same town within the last five or six years.

HYDROPATHY.

This sister pseudo-science flourished about the same period or somewhat later than homœopathy. For some years it produced a kind of fashionable attraction amongst all kinds of invalids, real and imaginary, chiefly the latter. It is now regarded as one of the many legitimate methods of restoring

health in properly selected cases. It was, I believe, first introduced into this country on a large scale by the late Dr. Gully at Malvern, whose name obtained such an unenviable notoriety in connection with the celebrated Bravo case.

MESMERISM.

Following in the wake of these other extravagant notions, Mesmerism, or as it was then called Animal Magnetism, made its appearance and absorbed much attention. In fact about 50 years ago it formed one of the most prominent and interesting topics of the day. There were many long and angry discussions respecting it, at some of the learned societies, and as might be expected numberless marvellous cases of a nervous character were related in the papers, including some amusing anecdotes of a few fasting girls. It was on this rock of mesmerism that Elliotson was wrecked and sustained that loss of position as a consulting physician which he never regained.

The Metallo-Therapy and Massage of the present day appear to be founded on pretty much the same lines as mesmerism, and are liable to the same gross abuses which prevailed when that was in fashion.

With respect to "Massage" it is said to be

most useful in patients who are *not* suffering from organic disease. This might have been anticipated. It consists of *isolation* from friends and relatives together with rubbing, kneading, etc. The essence of this mode of treatment appears to be the removal of the patient from the well meant but injurious influences of friendship and relationship. Of course proper feeding and judicious exercise must not be neglected.

Although not particularly euphonious "Massage" has a quasi-mysterious sound about it well calculated to prove attractive to the searcher after novelties. Cures by "Massage" will probably be presently recorded as marvellous, and evidence of the progress of the science of medicine. At the same time it will be well to remember that this "Massage" is the new name for our old friend "Shampooing" or "Rubbing" a method of treating certain complaints sufficiently familiar to everyone many years ago.

ALCOHOL.

The arguments for and against the use of this powerful but valuable agent have been so frequently, forcibly and exhaustively discussed in public during the last few years that I shall refrain from repeating them. Formerly it was

indiscriminately used as a remedy in the treatment of almost every disease. Even 25 or 30 years ago many patients were *secundum artem* literally deluged with alcohol. In some, probably in many instances, the health suffered and the duration of life was thereby shortened. In ordinary cases, that is to say in those attended with little or no danger, it was the fashion for the doctor to tell the friends of the patient or the patient himself "that a little wine or brandy was necessary to keep him up." Such advice was frequently carried out, not precisely as intended, but with slight or even substantial modifications. According to the law which generally applies in the end to all "fashionable" remedies, alcohol lost its position in the treatment of disease,—another instance of the rejection of a very useful medicine owing to its previous abuse. There are some medical men at the present day who refuse, under any circumstances, to believe that there is any healing or restorative virtue in alcohol. For my own part I cannot help feeling that when employed with discretion in definite quantities, it is one of the most useful and energetic therapeutic agents we possess, and for which no adequate substitute has as yet been discovered.

ANÆSTHETICS.

It cannot be denied that one of the greatest blessings of modern times to sufferers requiring surgical interference, has been the introduction of anæsthetics. Up to a certain point their use was extremely limited and judicious. Now there are many varieties of them, and numerous methods of administration. Moreover they are given for the most trifling operations. The present use of anæsthetics, (frequently from the importunity of the patients), is not justifiable or necessary, in fact it is neither more nor less than abuse. Here again fashion reigns supreme with the usual sequel. The danger inseparably connected with the production of insensibility is becoming familiarized, and therefore more or less despised; with what result may be gathered from the weekly journals in which "death from an anæsthetic" is by no means an unusual record. On the first introduction of anæsthetics, ether was invariably used, but displaced by chloroform about the year 1847. As years rolled on, the time for change came round, and the once despised ether has obtained favour again. In spite of the testimony of 30 years experience some medical men affirm that with the present knowledge of anæs-

thetics, the administrator of chloroform runs the risk of being convicted of manslaughter.

Thus opinions change with the fashion. In statistics I have seen quoted, the balance of safety seems to be slightly in favour of ether, but when everything is taken into consideration, both the direct and remote effects of each, it is not unlikely that the one may be just about as safe or as dangerous as the other. In order to establish a fair comparison they ought to be administered under exactly similar circumstances many hundreds of times, but of course there are many difficulties in the way of accomplishing such a task. One thing, however, is certain, that anything, no matter what chemical or other properties belong to it, which renders a human being totally insensible, sometimes for hours, to the sharpest pain, must be attended with considerable danger to life. Therefore such an agent should be used with extreme caution, and only when absolutely necessary. Had this always been kept in view, many lamentable deaths, and much grief and affliction might, and unquestionably would, have been prevented. In this place reference may be properly made to the comparatively recent use of anæsthetics during childbirth, aye, even in simple straight forward cases. What the precise method may be of conducting them in the metropolis at the present time, I know not, but a few years ago it was the

"fashion" to produce a kind of intoxication, and sometimes complete insensibility. So much was this the case, at any rate in the upper ranks of life, that I have heard of ladies going to London to be attended by Dr.———, who *always* gave chloroform on such occasions. Whether I am right or not, I cannot help thinking that the invariable use of an anæsthetic in this manner is a most pernicious custom for many reasons.

Relief from pain and suffering, when it can be accomplished with comparative ease and safety, must be regarded as a luxury. But like many luxuries it has manifest disadvantages. Apart from any danger connected with the diminution or removal of pain, which is an essential part of a complicated natural process, it must not be forgotten that the inhalation of these stupifying vapours produces temporary havoc amongst the cells and fibres of the brain and their functions. The will being paralysed, words are spoken, and actions attempted which in a state of sensibility would never have been uttered or performed, no nor even contemplated. It may be positively affirmed that the involuntary and erratic emanations from a brain, whether in the form of words or actions, cannot be either edifying to the observer, or satisfactory to the patient.

CHLORAL.

And what can be said of this near relative of chloroform? Prudently employed there is no doubt about its great value, but I believe I am not using hyperbolical language when I state that scores of lives have been sacrificed directly or indirectly by the indiscriminate and incautious administration of this powerful drug. Its soothing properties have unfortunately become so generally known, that it is frequently taken without the advice of a medical man, a dangerous experiment indeed, and one which has been followed on more than one occasion by fatal results.

DIGITALIS OR FOXGLOVE.

And now I turn to another very important and valuable remedy concerning the action of which there has been much difference of opinion. I refer to Digitalis. In the year 1800 and a few years afterwards it was highly extolled, and extensively prescribed in the treatment of dropsies and inflammations. And one of the most prominent advocates, curiously enough, for its free and liberal use was the late Dr. Mossman of Bradford. The following is a passage from one of his interesting articles

in the *Medical and Physical Journal* for the year 1800. "I rejoice that digitalis is becoming (what?) a *'fashionable'* remedy, and I know the period will soon arrive when it will rank with the first of healing agents." In another place he and his cotemporaries speak of its action in a most positive manner in pulmonary consumption so much so that they consider "consumption will very soon cease to be the opprobrium of our art." This language might be supposed to issue from the lips or pens of some of the morbid germ theorists of our own time, who seem to think that with the inhalation of carbolic acid, thymol, eucalyptus oil, or other antiseptic, "consumption will very soon cease to be the opprobrium of our art." This is an idea truly Utopian, and devoutly to be wished, but I fear its realisation is in the far off undefinable distance.

Again Mossman declared that digitalis in inflammation of the lung was as much of a specific as quinine in ague. In the same year one Dr. Drake gave it as his opinion, "that wilfully to have recourse to the old inefficient plan when foxglove was within reach was to give up the patient to certain dissolution." At this period the Medical Journals abounded with papers on digitalis. They were, so to speak saturated with it, and yet how soon, at any rate as regards the treatment of pulmonary consumption, did it fall into comparative

disuse and obscurity. Years passed away, about half a century, and with the exception of its ordinary and occasional employment to control and regulate the action of the heart, nothing very remarkable was heard of it. Then from 10 to 15 years ago that interesting and ingenious machine for delineating the beats of the pulse, invented by M. Marey, became the centre of attraction,—of course I refer to the Sphygmograph. Since its first introduction it has been modified in many ways and engaged much of the attention of many eminent men. Some of them have endeavoured to persuade us that an immense flood of light has been thrown on the action of digitalis by the use of this little instrument, and one of the effects of this drug we were informed was "increased arterial tension." From this time forward that is to say during the last few years every medical man must have noticed the frequent occurrence of what I shall venture to call the fashionable expression "arterial tension." But it has been difficult, indeed almost impossible, to obtain anything like a satisfactory explanation or definition of it. The discussion on arterial tension which took place at Liverpool at the Annual Meeting of the British Medical Association last August did not indicate that there was a general agreement as to what was meant by the expression.

Although it has been in constant use for years

its precise signification in the present day seems to be very imperfectly defined. I would not for a moment pretend to say that such a physical condition is not a reality, and indeed a very important guide to treatment in some instances, but I believe that so-called arterial tension supposed to be brought about by the action of digitalis has frequently been simple distension of the blood-vessel *i.e.* relaxation of its muscular coat, plus diminished frequency of cardiac pulsations. The "increased arterial tension" said to be produced by digitalis was regarded as a phenomenon of a tonic nature, and finally this drug was classed with stimulants such as Alcohol, Ether, Ammonia and the like, and in this category it is now placed.

As if to convince the medical world of its stimulating action, it has been highly recommended in fatty degeneration of the heart and other affections attended with a disposition to syncope. Whatever may be its precise action, or in whatsoever group of remedies it may be placed according to its supposed effects, I feel thoroughly convinced that the recommendation above mentioned is a very dangerous one, and ought not to be adopted, without the simultaneous use of alcohol or some similar stimulant. All trustworthy evidence proves that digitalis exercises a most unmistakable sedative and controlling influence over the heart, but that it is a powerful agent for good or evil, and requires

cautious administration. Its vaunted stimulating power is a mere "fashionable" notion introduced with the Sphygmograph, and as I am inclined to think must eventually be discarded. The said instrument is a marvel of ingenious contrivance but for all practical purposes of very little value; as Dr. Broadbent says, "after all, the educated finger can tell us everything revealed by the Sphygmograph, *and more.*" It is true I have heard of some gentlemen acquiring considerable reputation by its use. In one instance it was gravely asserted by a well-to-do patient that this instrument wrote out the name of the disease from which he was suffering, viz., gout. It may be interesting here to refer to an instrument of a somewhat similar description invented about 50 years ago by one Dr. Herrison. It consisted of an upright graduated glass tube with a bell-shaped base across the mouth of which was stretched an animal membrane of some kind, the interior of the bell being filled with mercury. The base was then placed on the pulse when the approximate force of each pulsation was indicated in the tube by the rising and falling of the mercury. It was called the Sphygmometer. In the year 1834 the Lancet referred to it in a leading article in the following terms:—"We trust soon to see it in the hands of every physician." This was just one of those pretty coruscations of medical fashion, for I could

find no further mention of it in the subsequent literature. To many of my professional brethren, to some even who have confidence in the stimulating power of digitalis (theoretically at any rate), I have put the question, would you give digitalis in approaching syncope? From their manner I have been convinced they wished to answer in the affirmative, but their tongues refused to utter a categorical "yes."

One gentleman told me that he should give it without any hesitation, but added he, *in conjunction with a little brandy*. The modern theory of the action of digitalis is I believe a dangerous one. The sooner we revert to the antiquated notion of our forefathers, viz., that digitalis is a sedative and depressant, the better will it be for our patients, as well as for our reputation as medical practitioners.

MINERAL WATERS.

For many years thousands of invalids have been in the habit of seeking for health by the external and internal use of various mineral waters, and in numerous instances attended with signal success. It is impossible to avoid recognising their beneficial influence in special cases, at the same time the use of some of these waters has been regulated more or less by "fashion." To enumerate them

all in proper order as each made its appearance, and was declared to be especially efficacious in this or that disease, would be a task of considerable difficulty. It will be sufficient to state that one has been regarded with favour until the appearance of another which was said to possess some additional or superior advantages. This in its turn was superseded by a third still more abundant in excellent qualities, and so on. At one time mildness of action is the recommendation, at another the patronage of the profession is sought because the desired effect is brought about with power and rapidity. This deserves attention on account of its superior flavour, that because it has been employed or praised by some eminent personage, and so water after water is constantly bubbling up from some natural or artificial source (it scarcely signifies from which) deluging all the medical literature of the day. As an illustration I may mention that I have before me at the present moment a recent number of the Lancet on one page of which I observe Hunyadi Janos, Friedrichshall, Rubinat, and Æsculap, all excellent waters, each one of which, according to testimony from various quarters, possesses extraordinary virtues, and as a matter of course deserves extensive patronage. There is something attractive in a name especially if out of the common way, and it is sometimes argued, not however by logicians,

that a water having a peculiar name must be endowed with peculiar and therefore valuable qualities. One of the most recent additions to the already too long list of mineral waters is an admirable specimen of nomenclature particularly attractive to the multitude. Surely something marvellous in the way of healing virtue must exist in a liquid bearing such a title. Æsculap! Æsculap! why that is an abbreviation of the deity presiding over physic. The name evidently indicates supernatural power and excellence.

In spite of minute analyses by eminent chemists, and the eulogies bestowed on these various waters in the shape of testimonials, it is highly probable that in the majority of cases a little sulphate of magnesia or soda given at the proper time and in suitable doses would answer as well as the most fashionable medicinal spring in the world.

HEALTH RESORTS.

In the midst of the continuous struggle for life, and the various ways and means of supporting it, all classes and sections of society feel the benefit of change. For some individua, lsat different intervals according to circumstances, a period of absolute rest from daily toil, over and above the one

day in seven which is not sufficiently appreciated, is indispensable for the maintenance of health. In others, rest, in the ordinary acceptation of the term, is not required, indeed it is rather injurious than otherwise. But to the multitude a judicious change of some kind or other, not necessarily one from activity to absolute idleness, has an unfailing tendency to promote a healthy vigorous tone both of body and mind. Day after day, week after week, month after month, the professional man, man of business, and artisan pursue their daily tasks with monotonous regularity. For all practical purposes to-day is the counterpart of yesterday, and nothing more can be anticipated on the morrow. They behold the same buildings, pass through the same streets, lanes or fields, converse with the same people, breathe the same air of whatever quality it may be, and live according to a moderately well defined routine. Under such circumstances there is but little variation either in their mental or physical condition.

The nervous centres and fibres, that is, the originators and conductors of that undefinable energy which is the main spring of all human actions, are apt to become weakened or deteriorated from excessive use.

Therefore it is advisable periodically to change the direction of this energy and transfer it from one set of cells and fibres to some others. In fami-

liar language it is well to alter the points and for a time turn the trains of thought and action on to another line, in order that the old one may undergo a thorough process of renovation and repair. This indeed is the essence of that change which is so heartily welcomed at least once a year by all kinds of toilers and moilers.

Apart from this regular change which I believe is of material assistance in the maintenance as well as the restoration of health, there are localities in various parts of the world, owing to special climatic and other conditions, which are supposed to be particularly suitable for the cure of certain diseases. In some cases a warm humid relaxing atmosphere is beneficial such as may be met with at Torquay, Penzance, and the south-west coast of Ireland. In others, the dry hot stimulating air of Nice, Mentone, Algiers, Malta or Egypt is calculated to produce better results. Again there are health resorts in various parts of the world, the chief recommendation of which is their altitude, say from 4000 to 8000 feet above the level of the sea. At such a height the air is naturally more pure, and there is as might be supposed a tendency to increase the capacity of the chest. Hence, more especially in these latter days mountain air has been highly extolled for lung affections, the most "fashionable" places being at this time the Engadine and Davos Platz in Switzerland.

Lastly South Africa, Australia (certain parts of it) and New Zealand, all of them favoured with climates on the whole considerably more genial than our own, enjoy the reputation of having been the means of improving the health, and in some instances of permanently arresting disease in persons suffering from consumption. It must not, however, be forgotten that in such cases a long sea voyage has preceded a sojourn in these distant regions, and that perhaps is one, if not the most potent, factor in restoring the health of such invalids.

Returning for a moment to Davos Platz, it has been urged that its special virtues are due to the purity and stillness of the air. This argument seems to me to be unsound for the following reasons: Firstly, I suppose nearly every medical man is convinced of the value of a long sea voyage in a sailing ship, but no one could contend that the atmosphere in which and by means of which that voyage was accomplished could be remarkable for its stillness. Secondly, there are many other places at or about which it is granted the air is sufficiently pure but the boisterous character of the winds condemns them.

The stillness and purity of the atmosphere appear to be scarcely sufficient to give Davos the pre-eminence. The simple advertisement which

may now be seen in the Medical Journals every week as follows :—

"Davos Platz *the* cure place for persons suffering from pulmonary disease," cannot be accepted without considerable reservation by the majority of medical men.

According to this advertisement it is *the* cure place etc. I venture to think the advertisement would be more correct if the word *fashionable* were inserted before cure. Mountain air is no doubt excellent for some invalids, but Davos I imagine is only one of the many charming spots in nature which will eventually take its proper position amongst health resorts. About 20 or 25 years ago it will be remembered that Madeira was in great favour as a *cure place* for pulmonary complaints. One gentleman asserted "he was convinced that if a patient would leave early enough after being advised to go to Madeira, we could with certainty promise a cure." Poor Madeira is now rarely mentioned. It is out of date and fashion. And many places in England have from time to time received a certain amount of patronage variable in extent and duration, because of their reputed beneficial effect on the health, for example Dover, Hastings, Ventnor, Bournemouth, Clifton and Grange. Dover and Hastings are not in favour much at the present day, and of the remainder perhaps Bournemouth is the most highly esteemed.

'Ere long another obscure nook on our southern shores will in all probability attract multitudes of health-seekers. A few preliminaries are, however, necessary. A favourable meteorological chart, the recovery of some well known individual from confirmed, or even threatened lung disease, and forthwith the place will flourish and become the most fashionable resort for the cure of such diseases.

Whilst granting that pure air is invaluable not only for the maintenance of health but for recovery from many diseases, it must be borne in mind, that apart from a genial climate and sea-breezes, a thorough change in every detail of life combined with comparative ease and freedom from professional, social or domestic duties and cares has much, very much, to do with complete restoration to health.

I come now to my second proposition which is as follows:—

II. That certain theories connected with etiology have become so fashionable, and the professional mind is so engrossed with them, that there is a tendency not only to check scientific investigation in other directions but to obscure the actual, and it may be obvious, source of disease.

SEWER GAS.

For some years the production of certain diseases, from the emanations of sewers, such as typhoid fever, diphtheria, erysipelas, scarlatina, and cases of so-called blood poisoning, (in the absence of a better name) has been almost universally accepted by the profession as proven. More especially has this been the case with reference to typhoid fever and diphtheria. It is highly probable that the development of some, perhaps all, of these diseases is encouraged, if not actually caused by the inhalation of noxious effluvia, not however quite so frequently as is generally and *fashionably* supposed. I do not for one moment believe that it is wholesome or desirable for any one to inhale deleterious or offensive vapours or gases, at the same time it is worthy of note that scavengers do not appear to suffer in any special manner from the above named diseases.

Apart from any special knowledge, common sense directs us to avoid disagreeable odours, as much as possible. It is, however, well to bear in mind, that the most injurious emanations are not necessarily offensive. They may be perfectly inodorous. But I venture to think that it is a sanitary mistake and indeed a dangerous one, to be

always attributing disease to one distinct cause, especially when such causation cannot be positively proved. In the present day, the existence of the slightest circumstantial evidence in this direction, amounts in the minds of some persons to absolute proof. Thus all further enquiry as to any other possible mode of origin is checked, if not altogether prevented.

It must not be imagined that typhoid fever can arise only from sewer gas, or polluted milk or water. It is not sufficient to rest satisfied that everything in the way of precaution, has been accomplished, even though the drainage be perfect and the milk and the water free from all possible taint. Insufficient or improper food, exposure to cold, great bodily or mental depression or exhaustion; one or all, may in some instances constitute the actual exciting cause of a serious attack of typhoid fever. Some authorities maintain that nothing but "typhoid germs," can produce typhoid fever, others believe that it can arise *de novo*. To the latter class belonged the late Dr. Murchison, probably one of the best authorities on the subject in Great Britain. In every outbreak, the drains should of course be examined and if necessary put to rights, but the other possible and probable factors which contribute to produce the disease, ought always to be taken into consideration.

BACTERIO-MANIA.

In the present day it is almost impossible to listen to a scientific discussion in the medical world, without noticing frequent allusions to invisible, hypothetical, but yet destructive death-producing "germs." And what are these "germs"? They are supposed to be very minute organisms, called bacteria, or their spores floating about in the atmosphere in countless myriads.

That the air contains much organic matter and many individual organisms, is beyond the region of dispute, but that such visible organisms have anything whatever to do with disease, is pure hypothesis. Some speculative biologists appear to have satisfied themselves on this point, and would endeavour to persuade others that these organisms are dire instruments of destruction to human life, that they are indeed eagerly waiting, as it were, for an opportunity to enter our frail bodies by millions, and so speedily put an end to our earthly existence.

Of all the theories, which have prevailed in the scientific world during the present century, I apprehend that the "Germ-Theory of Disease" with all its ramifications has been the most "*fascinating*"

and the most "*fashionable.*" Under certain circumstances there may be some, perhaps much truth in it, but it is evident, that with it has been combined a very considerable amount of error.

Taking for granted that these noxious organisms are ever present in the air we breathe, how are we to escape them? By taking up our abode on the mountain tops, where we are told that germs are comparatively few or absent. The adoption of this plan, would I fear be somewhat inconvenient, if not altogether impracticable.

Therefore we are doomed to remain down below, and make the best of it by the use of antiseptics or any other means which has been suggested for the destruction or removal of the innumerable germs, which appear to be normal constituents of our atmosphere. With the idea of preventing their entrance into open wounds, a special method of treating the latter has been introduced by Professor Lister.

Notwithstanding the admirable results obtained by this gentleman, and the eternal debt of gratitude the profession and the public owe him, for the beneficial changes he has wrought in the practice of surgery, it appears that the advisability of the universal employment of antiseptics, is still an open question. It would be almost superhuman for a mind of ordinary calibre, especially if there were any previous tendency to scepticism on the

subject, to withstand the persuasive power of an eloquent address like that delivered by Mr. Savory at Cork, in the year 1879. In any case it was evident, that there were two sides to this great question — and so it remains. There are eminent surgeons in favour of the antiseptic treatment, and there are those of equal eminence who neither accept the doctrine nor follow the practice of Lister. Of course the majority are led by the fashion of the day.

Mr. T. Keith an eminent Edinburgh surgeon formerly used carbolic acid spray in an important operation which in his hands has been attended with signal success. Of late he has decided that the spray is not only useless but injurious. One inevitable conclusion to be drawn from Mr. Keith's experience is that the "germs" which this spray was supposed to destroy or render harmless are less deleterious than the spray itself. The spray-producing apparatus therefore with all its paraphernalia is a cumbrous, useless and expensive arrangement.

The treatment of wounds is a most important subject and one which has attracted much attention, more especially since the introduction of the germ-theory of disease. It is, however, a mere trifle compared with some of the extravagant ideas which have developed from what may be properly termed "the germs of the period."

BATTLE OF THE BACILLI OR RODS.

For some years at intervals there have been numerous disputes in connection with these interesting little organisms. Much has been written about them. In many instances their positive existence is taken for granted, although as causes of disease their reality has not as yet been satisfactorily demonstrated. It is true some organisms have been observed in certain conditions of animal bodies which the germ theorists maintain are the veritable disease germs themselves. They say, in effect, here is the essence of the disease it only requires catching and destroying and forthwith the disease will vanish. During the last two or three years these organisms have given rise to a keen controversy amongst some of the leading scientific men in Europe.

At present the contest is still being carried on with vigour. Inasmuch as the organism which has attracted the most attention is like a little rod, or bacillus, the climax of this scientific campaign may be termed the *Battle of the Bacilli*, which promises to be an engagement of long duration and considerable dimensions. I will endeavour to describe in a brief but rough sketch its origin and progress up to the present time.

Perhaps it should be stated at the outset that in most animal bodies soon after death, and sometimes very shortly before, certain minute organisms of a fungoid character may be observed by the aid of a fairly good microscope. They may be found in the blood, fluids and tissues generally, sometimes in one part or organ, sometimes in another, sometimes very few in number, at other times in myriads, very much depending on the temperature and moisture or dryness of the atmosphere, and the manner and rapidity of decomposition.

These little organisms are called bacteria and by some authorities have been divided into four groups, whether rightly so or not is a matter of opinion.

For my present purpose without going into details it is sufficient to recognize three varieties, viz.: Micrococci or little spheres, Bacilli or little rods, and Spirilla or little spirals. There are of course intermediate forms. The size varies considerably but in all cases they are very minute the measurements in some instances being several thousandths of an inch, in fact they "border on the invisible."

For the most part these interesting little objects are merely indications of ordinary natural phenomena which take place in the fluids and tissues of animal bodies sometimes very shortly before,

but generally a few hours after death. Even in blood or serous fluid taken from a healthy animal or person, some of these organisms may be observed after the fluid in question has been exposed for a few hours to a temperature favourable for their growth and development. There is nothing marvellous about it, indeed it is precisely what might have been expected. For what says one of our greatest microscopists, Dr. Lionel Beale? He tells us that the germs of these bacteria are every where present in the body waiting only for an opportunity to develop. His exact words are: "I can give you positive proof that bacteria germs exist not only upon the surface of the skin, but in the internal organs, in the interstices of healthy tissue and in the blood itself." Well, these organisms have been and still are regarded, I venture to think without sufficient evidence, the veritable cause and essence of numerous diseases.

For some years at intervals there have been signs in the medical world of the advent of a great controversy on the precise position of "germs" in disease, but when Dr. W. Roberts delivered his able address on "Contagium Vivum" before the British Medical Association at Manchester in 1877, the campaign may be considered to have fairly commenced in good earnest.

The diseases to which he referred more especially as being in all probability due to the intro-

duction into the blood by some method or other of these organisms, were splenic fever or anthrax, blood-poisoning or septicæmia, relapsing fever and some others. Excluding the various continental authorities, I believe Professor Greenfield, formerly of the Brown Institution, now of the University of Edinburgh, was the next who really took up the subject seriously and came to the conclusion more particularly with regard to anthrax, that the essence of the disease was the now famous organism known by name, if not by anything else, as the "bacillus anthracis."

As it had been ascertained that anthrax affected sheep and goats as well as other animals, and that much inferior and dirty mohair was imported into England for manufacturing purposes, the anthrax bacillus theory gained ground rapidly in this neighbourhood.* For a long period it had been noticed that occasionally a rapidly fatal illness seized those engaged in sorting certain kinds of wool, especially Van Mohair. At last the happy thought occurred that this so-called Woolsorter's disease was no other than anthrax. Evidence of a certain sort was obtained, and a conclusion drawn therefrom which fortunately coincided with the "happy thought."

Let us carefully review the nature of the evi-

* Bradford.

dence and endeavour to follow the various steps of it up to the final conclusion.

Anthrax is a disease very frequently and rapidly fatal, and after death *special* organisms like little rods are invariably found in the fluids and tissues. To begin with, this is a *petitio principii*—I do not say it is not true, it may be and I will suppose it is for the sake of argument. Anthrax is a disease which sometimes attacks sheep and goats especially in Asia Minor. Large quantities of wool are imported into this country from that district. Human beings who handle it and work amongst it are sometimes taken ill and die suddenly. In their bodies are sometimes observed organisms similar to those found in bodies dead of anthrax. Therefore these persons have died of anthrax.

Such is the evidence. A more illogical conclusion it is impossible to find for it will not stand the test of anyone of the methods of experimental inquiry.

However, in Professor Greenfield's lectures on this subject delivered in 1880 he asserted that the identity of anthrax and woolsorter's disease had been *conclusively established.* Whatever the organisms to which reference has been made may have to do with anthrax, or whether at some future date the connection between the two diseases may be proved, one thing is absolutely certain, viz., that the identity of anthrax and woolsorter's dis-

ease in the face of all available evidence *has not* as yet been conclusively established.

The following are my reasons for making so positive a statement.

In the first place the distinguished Professor in the same lecture, in which he declares the identity of anthrax and woolsorter's disease to have been conclusively established, asserts that the whole subject of anthrax is in a transitional state, and that the criteria hitherto accepted for its diagnosis are obviously inadequate. However he does not enumerate any criteria which are adequate. The reason is plain. To my finite comprehension it seems perfectly impossible to *conclusively establish* the connection between the "transitional" anthrax and the still less definite woolsorter's disease, while the one is in a confessedly transitional state and the other altogether involved in speculation and obscurity.

But in the second place in one of these lectures it is stated that the diagnosis of anthrax in man must largely depend upon *known exposure* to infection. What a glaring confession of ignorance! How is it possible I would ask to recognize the presence of anthrax poison? Is there a sufficient power of discrimination in anyone's olfactories? Have the supposed specific germs ever been positively seen and separated in the wool said to be infected? Surely there is no thoughtful person in existence

who would be rash enough to maintain that every offensive fleece owes its unpleasant odour to anthrax poison. It requires no elaborate process of reasoning to prove that the presence of a disgusting smell in certain fleeces or bales of wool is scarcely sufficient to warrant the conclusion that nothing but the poison of anthrax can produce it. And yet this is what we are asked to believe. Any fleece which has been stripped off a dead animal (no matter what was the cause of death) is liable to have portions of skin, etc., attached to it. As a matter of course it would be offensive, and probably more or less injurious to those who worked amongst it. This, however, is no proof that such fleeces belonged to animals that died of anthrax. But let us go a step further, and compare this with cases of ordinary infectious disease. Here I would enquire again are we compelled to wait before pronouncing a case to be one of scarlet fever, small pox, or measles until we are *certain* the patient has been exposed to the virus of these diseases? This is an evident absurdity. As a rule every medical man knows a well marked case of anyone of the exanthemata without first satisfying himself of the *known exposure* of his patient to the poison.

Thirdly, the Professor says that after death before decomposition occurs, the presence of bacilli, of the size and form of anthrax bacilli,

without other bacteria is distinctive, but after decomposition has set in the presence of similar bacilli with other bacteria is inconclusive. How is it possible to discover the precise moment at which decomposition commences? Here we have a distinction offered us which on account of its very nature we are unable to grasp and without it the diagnosis even after death is impossible. But apart from this, one of the illustrative cases mentioned in the fourth lecture militates against such a notion.

Fourthly, Dr. Greenfield affirms that the only certain test is inoculation, and that this is negative when decomposition sets in.

Well this being so, he describes inoculation experiments as having been made in nine cases, and in FOUR only were any visible results obtained.

What of the other five cases? Of course as inoculation is the *only certain* test, and it failed in these five, therefore they were not cases of anthrax, and yet the blood of some of them contained "bacilli" said to be typical of anthrax. An attempt is made to explain the failure on the score of lapse of time after death, but this plea will not bear one moment's examination. The only certain test failed, therefore five cases were not anthrax.

Shortly after the anthrax-bacillus theory became pretty widely circulated the attention of the medical public was directed to four *distinct* cases of

woolsorters' disease by the British Medical Journal. Why were they distinct? They were peculiar cases, but says the editorial article, "the presence of the bacillus left no room for doubt" as to their anthracic character, especially as a mouse had been killed by the injection into its body of some putrid blood taken from one or more of them. But in those days the "bacillus" itself was a comparative novelty, and was considered sufficiently diagnostic of anthrax especially if "motionless." Finding that this was not conclusive, as bacilli were discovered to be "motionless" in other diseases, and the supposed anthrax bacilli under certain conditions exhibited motion, inoculation was next introduced as the *only certain* test, which has been shewn to be equally fallible. Whether the various dyes have or have not the power of selecting the bacillus said to be peculiar to anthrax I know not, but this I can testify that many cases were confidently pronounced to be anthrax, (I believe even by Professor Greenfield), before any staining liquids had been employed.

Just for the sake of illustrating the manner in which alarming and fallacious statements have originated and how little reliance can be placed on dogmatic assertion I will call attention to a case of my own. Had it not occurred in all probability I should not have ventured into the controversial lists on the subject. But seeing that I

possessed more information about it than anyone else I considered myself not only entitled, but in duty bound to state what I knew, especially as there was so much error mixed up with it. The history of the case is very briefly, as follows:—

In a cottage in the town of Bradford the dead body of a man about forty years of age was observed to be considerably discoloured. More than *forty hours* had elapsed since death and the weather was warm and muggy. A brownish fluid was oozing from the mouth and nostrils. Some of this fluid and the blood were examined a few hours later by the aid of a microscope. Both were said to abound in "*bacillus anthracis*" !! The same day a mouse was inoculated with some of the putrid fluid or fluids obtained from this corpse. It succumbed on the second day and in its body were found "swarms of bacilli," meaning of course "anthracis." This then is a brief narrative of a case which on the face of it appeared to be of a specific nature. It was moreover placarded in Bradford in large letters as, Another Death from Woolsorters' disease—Singular Development!

Let it be especially noted that this was described in one of the leading Medical Journals as a *distinct* case of woolsorters' disease, and its identity with anthrax proved by the finding of an organism called "bacillus," supposed to be characteristic of anthrax. And further be it noted that it is one of

the cases quoted by Mr. John Spear in his official and very exhaustive report on woolsorters' disease. There never was, I imagine, in the annals of medicine a better example of the palpable errors into which zealous but indiscreet men may be plunged by a fashionable theory, than the exaggerated prominence given to this very common example of disease. A little more information concerning it and the singular development connected therewith, clears up all mystery, and as far as this case is concerned, effectually disposes of anthrax-bacillus theory and its enthusiastic advocates.

This man a wool-combing overlooker, became an out-patient of mine at the Bradford Infirmary on July 24th, 1880. He had then been suffering for six months from palpitation of the heart, nausea and vomiting, and for three months had complained of a troublesome cough. Physical signs revealed extensive valvular disease of the heart, a certain amount of bronchitis and congestion of the lungs. For about six weeks he was under my observation. On September 10th he was taken suddenly worse, sent for my friend Mr. Denby, who quite independently of me came to the same conclusion, as to the nature of the poor fellows' illness. He died the following day. The sequel I have already related. I ought here to observe that anyone reading the account of this case in the Medical Journal would naturally infer that the

man was suddenly seized with a dire disease which ended fatally in about twenty-four hours.

The organism found in the blood and fluids of this body was one which may be seen very often, if not always, in and about all dead bodies forty hours after death in warm, muggy weather. And yet this was called "bacillus anthracis" without the smallest fragment of really valid evidence. This is a specimen of the kind of evidence we are asked to accept anent this bacillus theory. Others might be mentioned quite as inconsistent with reason, but the one to which I have alluded is sufficient to indicate the paramount importance of thoroughly sifting every statement made in connection with the *fashionable ideas* of the day.

It will be remembered that at the International Medical Congress held in London about two years ago, there were several papers read, followed by animated discussion, on the relation of micro-organisms to disease. Far be it from me even to attempt, what I know is far out of my reach, to disparage the labours of so distinguished a savant as M. Pasteur. But in spite of his skill and reputation it is scarcely wise to accept all the dicta which from time to time emanate from a gentleman who has attained such a position in the scientific world. At the Congress M. Pasteur seemed to be the fashion of the week, and he spoke as if he were the only person whose words were entitled to credence.

He disagreed with Professor Fokker, for he was confident his experiments were not correct. He doubted the validity of Dr. Büchner's conclusions, and Dr. Greenfield's fared no better. In fact he would not believe what anyone stated except he could see it. Because M. Pasteur had not seen it there was an end of the matter. He declared that M. Béchamp was wrong, Dr. Bastian was wrong, that everybody was wrong who did not believe in the specific nature of germs, and he ought to have added in the infallibility of M. Pasteur. This was the kind of language used by a gentleman who was evidently suffering from the intoxication of popularity, and could not be regarded in any other light. There was no scientific reasoning about it.

It must not be forgotten that in spite of the apparent conclusive character of his famous inoculation experiments on sheep with diluted anthrax poison, they were not corroborated by Professor Klein in this country. Indeed the latter gentleman advised the Privy Council not to attempt M. Pasteur's plan for he considered it dangerous. Moreover, the great Teutonic authority has declared that Pasteur's protective inoculation *is of no practical value and cannot yet be accepted as a scientific fact.* Compared with Pasteur's egotistical assertions and his emphatic denunciation of the opinions of others, this criticism of Koch's is somewhat entertaining. It cannot be very re-assuring to the

morbid-germ theorist and it must increase the scepticism of the sceptic.

Taking leave of anthrax, I will next refer to Brautlecht's typhoid bacillus. He and subsequently Eberth and Coats of Glasgow announced that they had discovered a bacillus peculiar to typhoid fever. The characters of these bacilli were stated to be precisely those of ordinary bacilli (what are *ordinary* bacilli I would ask?) the only difference being the small capacity they possess for taking on the staining of hæmatoxylon, methyl-violet, and bismarck-brown. Out of seventeen cases in six only were these wonderful bacilli found. In spite of this doubtful evidence "typhoid bacillus" has now a place in the long list of pathological bacteria.

And in the midst of this epidemic of bacteriomania the discovery of a new specific organism either in the shape of micrococcus or bacillus is a matter of almost daily or perhaps weekly occurrence.

There are the bacilli of whooping cough, of leprosy, of glanders, and organisms peculiar to measles, erysipelas and several other diseases. After a while we shall doubtless have an organism of some kind or other for every disease under the sun.

But the bacillus of tubercle described by Koch and some others promises to eclipse the whole of the bacilli and micrococci family in its attractions.

It is not long since we were told in an authoritative manner in the Medical Journals, that the bacillus of tubercle had been not only discovered by Koch, but distinctly separated from all other bacilli, and that we had now arrived at the veritable essence of this terrible and fatal disease. Naturally enough the general public believed all this, but they are somewhat surprised to learn that consumption is an infectious disease and that it is caused by the inhalation or introduction into the body of bacilli or their spores. This tubercle-bacillus theory infectious as it is, in more ways than one, can scarcely make headway against the personal evidence of hundreds and thousands of individuals whose very existence is directly opposed to such an extravagant notion. It has been stated that the evidence in favour of communication from husband to wife is *very strong*. The evidence in precisely the opposite direction has been *very strong* in my experience, and that of many of my professional brethren. I hope some day to be able to publish some statistics on the subject. The occasional apparent transmission of consumption from one to another I do not deny, but it is comparatively rare, and does not affect the main question.

As one argument against this infection theory of consumption the following history of a medical man will serve as a good illustration. His mother had glandular abscess in the neck when

a girl and has had a large bronchocele for many years. His maternal grandmother died in middle life, and his mother's only sister died of spinal disease at about 25 years of age. Several of his mother's paternal uncles died of consumption. He lost a brother and a sister in infancy, the former of some wasting disease, the latter of multiple abscesses. One of his sisters died of consumption aged 40 years, and a brother æt. 35 years of pneumonia. Another brother had two attacks of the last named disease but completely recovered. When about 23 years of age he spent nine months at the Brompton Consumption Hospital, and there he must have lived on tubercle bacilli, and not only so, but flourished on them. He was occupied many hours daily in the wards and at one time used to make three, four, or even more post-mortem examinations in a week, without any carbolic acid, or other antiseptic precaution. He frequently inoculated himself by accident, and yet he escaped the destructive power of these terrible organisms. Possibly he became acclimatised. This is only one out of hundreds of instances tending to disprove the infectious character of consumption. Taking into consideration the family history no combination of circumstances could have been more favourable for the production of the disease than that in which this individual was placed.

Numerous examples equally antagonistic to this

notion might be readily adduced, not the least important being the number of nurses, servants and officials at the Consumption Hospital who have been inhaling these terrific organisms in myriads for years without any untoward result.

Even in the face of all evidence to the contrary Dr. Heron is bold enough to state that for a *large* proportion of mankind phthisis is an infectious disease. Could such words ever have been written or uttered except under the influence of what I have ventured to designate bacterio-mania? Surely neither Dr. Heron, nor any other gentleman, can believe, even if phthisis be infectious in very rare instances, that it can be so to a large proportion of mankind.

Now that the first shock of Koch's startling discovery is over there is somewhat of a reactionary tone prevailing, and some articles in the Medical Journals are written in much more cautious language than heretofore. For instance in a comparatively recent one I find it stated that the "value of the tentative attitude of the scientific mind towards the whole subject of bacterial pathology has been at no time more apparent than at present."

What was considered proved is now declared to be something to be watched and very carefully watched, involving therefore doubt as to previous conclusions. That some organism is observed in the shape of a bacillus in certain lung diseases (with

exceptions be it remembered) is an ascertained fact, and the exaggerated importance attached to it is another fact equally well ascertained. The dyes used to stain these bacilli and the somewhat complicated heating, steeping and washing processes to which they must be subjected ere they can be dignified with the classical epithet "tuberculosi" are gradually becoming more and more doubtful as methods of distinguishing one bacillus from another. Some eminent observers affirm that other bacilli are affected in a similar manner by the same dyes. This I am told by old microscopists, might have been anticipated. One gentleman has found bacilli in certain excreta which behave in precisely the same manner as the tubercle bacilli in the presence of the staining agents.

Professor Stricker of Vienna and his assistant Dr. Spina, who has worked in the laboratory of the former for 13 years, have gone over the same ground as Koch, and deny that the bacilli found in tubercle possess any specific characters, or that they are in any way the carriers or active agents of disease.

Dr. Pollock, Consulting Physician to the Brompton Consumption Hospital, in his comparatively recent lectures on Tuberculosis declares very sagaciously "that by scrutinizing the variety of opinions on this subject, we shall at least learn, that

knowledge while rapidly progressive, demands an impartiality of mind and caution in decision, for the facts of to-day may not be borne out by the later experiments of to-morrow."

The truth of Dr. Pollock's words has been illustrated over and over again and promises to receive further confirmation in the matter of tubercle-bacilli.

Well then with respect to phthisis or for the present let it be termed tubercle, certain organisms called bacilli are said to be characteristic of its presence. At the commencement of this engagement we should have been probably informed that marked peculiarities of form or movement were visible in these objects which are themselves "bordering on the invisible." On one occasion I had the opportunity of listening to a gentleman who positively had the confidence to assert that one *kind* of bacillus might be distinguished from another because it was a *little* stouter and moved a *little* quicker. It is true that practically he was a novice at microscopic work. Such distinctions as these I apprehend are of no value whatever. But the dyes seem to have settled any previous doubtful points of difference. The organisms found in connection with lung disease (especially be it noted when the tissue is just beginning to disorganise and in direct communication with the air), are stated to be present in only one kind

of disease—and that disease is tubercle. But unfortunately in spite of numerous lengthy discussions amongst the most eminent men "tubercle" has has never yet been properly and clearly defined. Opinions differ widely as to its precise nature.

It is important to bear this in mind. For the same organisms have been found in all parts of the body in certain patients; also in scrofula, in diseased joints, and in lupus. Lichtheim says he has found exactly the same organism in inflammation of the lung. Toussaint who has been quoted as a great authority in some other matters, declares that "micrococci" are the offenders in tubercle. And there are other points which might be mentioned tending to throw grave doubts on Koch's reputed discovery. Even Koch himself says there are forms of tuberculosis in which bacilli are *not* present.

The professional mind has been gradually educated for the reception of any idea springing out of bacilli (or their spores when bacilli are not forthcoming), especially when the leading articles in the Medical Journals have appeared to be perfectly satisfied with the conclusive character of all available evidence.

With this implicit faith in the tubercle-bacillus theory it is not surprising that the critics on Dr. Creighton's Pathological address at Liverpool should have been somewhat severe. One of them

evidently thinks that it ought to have swarmed with micrococci, bacilli and germs of all descriptions. He is indignant because Dr. Creighton ignores bacilli. Probably he had been nearly poisoned with them beforehand, and he chose to mark out a distinct and more refreshing path for himself. The same critic suggests that "possibly it is because a bacillus is so small that certain minds cannot grasp the idea of its existence and of its destructive power." The existence thereof nobody doubts, but its destructive power is quite another matter. Fortunately it is one of the prerogatives of a rational being to reason, *i.e.* weigh evidence. In the first place the destructive character of this or that bacillus has not yet been demonstrated, and in the second place the perfect harmlessness of swarms of such organisms has been proved over and over again. But, further in the same article bacillus of tubercle is compared with the acarus scabiei. Scabies and tuberculosis according to the writer are in certain respects completely analogous. Whatever else the bacillus may be, the highest authorities declare that it certainly is not an animal. Moreover it is the height of absurdity to compare the two diseases for there is absolutely no point of analogy between them, especially when it is remembered that scabies is produced by an insect the male and female of which have been readily recognized.

The most recent addition to the now vast army of bacilli is the one stated to have been discovered by Koch in cholera. He went out to Egypt to look for it and has been successful, as might have been expected. He has found it, but as yet does not positively assert that it is the cause of cholera. He thinks it may be merely a concomitant. However, he has gone to India to make further investigations. Pasteur has been searching for the same organism in the same part of the world but without success. At this point I cannot do better than quote a passage from the close of a leading article in the *British Medical Journal* for the 27 Oct. 1883.

"We do, however, hope that should the results of their inquiries be of a negative character, they will not hesitate to say so definitely and with no uncertain sound: as it is a hindrance rather than a help to the true progress of medical science that *bogey-germs* should from time to time be set up, only to be knocked down again, and forgotten."

With the sentiment contained in the last clause we must all cordially agree. Being anxious to know what were the germs referred to in such dignified terms I wrote to the editor asking for information. His remarks were very significant therefore I give them verbatim as follows:

"If our correspondent will consult the index of any of the Medical Journals of the last ten or fifteen years, he will have but little difficulty in

recognising a few of the defunct germs to which we referred. History repeats itself, and we sometimes wonder whether a few even of the most popular germs of to-day may not ten years hence be distinguished by an epitaph only."

It is, I think, a pity the editor did not endeavour to give a direct answer to my question. I confess I am unable to discover what germs are now generally considered defunct. If it has been decided that some of them ought to be placed in that category why not specify them ?

According to present notions all germs seem to possess a very remarkable vitality—at any rate in the professional mind. Personally I am bold enough to believe that the majority of so-called morbid germs would be more correctly designated bogey-germs. And indeed the editor of the *British Medical Journal*, as I gather from his remarks, appears to entertain a somewhat similar idea. He thinks some of these popular germs will be "defunct" in ten years—ten years is a long time—I have a notion (it may be erroneous) that less than half that period will dispose of a good many of them. One thing, however, is quite clear that bogey-germs have been floating about, otherwise no allusion would have been made to them. Perhaps it is better for the present not to give publicity to the circumstances under which these bogey-germs came to light. The expression at least indicates

something of the nature of unreality and carries with it a certain amount of significance which should not be overlooked by the hitherto too faithful believers in specific morbid bacilli.

If, however, the germ-theory of disease be true, to the extent suggested by some authorities, (and I do not take upon myself the responsibility of denying it) and if the bacilli which have been seen, or their spores, possibly in some instances possessing merely a hypothetical existence, are realities, and have the dangerous properties attributed to them it is necessary to commence hostilities at once.

We must resist their incursions into our bodies by the most approved methods. The universal use of some form of respirator with a lavish employment of various germicides such as carbolic acid, sulphurous acid and the like, the establishment of antiseptic spray-producers on a gigantic scale, and the erection of numerous huge fans driven by steam power might help to diminish their number or render them less injurious.

But Pasteur's celebrated experiments on the sheep suggest the most efficient method of dealing with all these destructive bacilli. The diseases said to be produced by a specific bacillus are daily increasing in number. The experiments of Pasteur and those of M. Toussaint seem to indicate that every disease which is represented or said to be represented by a specific organism may probably

be prevented or rendered harmless by the inoculation of all healthy people with the attenuated virus of that disease. Therefore after a time it is reasonable to suppose that medical men will be largely occupied in inserting the diluted poison first of this disease, and then of that, into the system of every member of the community.

A pleasant idea, forsooth! but by no means extravagant considering many of the statements made about this great bacterial question. I can imagine someone enquiring whether there is not just as much reason to suppose that inoculation with the diluted poison of other diseases is as likely to be attended with beneficial results as vaccination? I think not. For whatever may be the explanation, the evidence of the power of vaccine lymph to prevent or modify one of the most terrible and loathsome diseases known, viz., small-pox appears to be both complete and conclusive. But surely it does not follow that the inoculation of healthy bodies with all kinds of animal poisons is advisable or likely to lead to a general prolongation of life. And here for the present I will take my my leave of the "battle of the bacilli."

Although the termination of the struggle may not be just yet, the definition of specific morbid bacilli appears to be gradually becoming more hazy and indistinct. It is not improbable that eventually many if not all of the various organisms

which have excited so much interest and controversy will settle down into respectable positions as curiosities of medical science and literature.

I fancy I can hear the bacillus apostles crying out, "you know nothing about it, you are an ignoramus, you are not an authority." Be it so. Granted that I am totally ignorant on the question. I do not ask anyone to put the slightest value on my opinion. But I do venture to urge upon those who have not already taken the trouble to think about this subject to judge for themselves. Let them consider carefully the conflicting and contradictory nature of the evidence, let them weigh the words and opinions of distinguished men and men of experience and then exercise their own powers of observation and reasoning. Thus they will be prevented from taking a precipitate and heedless plunge into the fascinating but turbid bacterial current of thought, which threatens to absorb and overwhelm all other ideas connected with the nature and causation of disease.

CONCLUDING REMARKS.

Many more arguments might be adduced to shew that the treatment of disease and the various theories connected with its causation are more or

less regulated by fashion. The illustrations which I have introduced are amply sufficient to prove it. But before coming to a conclusion I desire to invite attention to two or three additional facts.

And firstly many so-called novelties in the medical world like fashions in other departments are simply revivals of old remedies or ideas, but it may be more or less in disguise. On referring to the literature even of the early part of the present century it is somewhat startling to find a description of many so-called novelties of the day. In the year 1800 or there abouts one Dr. Currie was in the habit of using a clinical thermometer about 6 inches long graduated from 80° F. to 112° F. The same gentleman also recommended cold affusion in fevers, about which as a comparatively recent method of treatment much has been written. Somewhat later inhalations of various kinds were in common use for the treatment of certain lung diseases, but probably for a different reason than that which is now in fashion.

Transfusion was an operation of common occurrence. Indeed in France it was so much abused that the Government was compelled to put a stop to it. Ether which is now considered by some authorities as the best and safest anæsthetic was discarded some 50 years ago and chloroform introduced as something far superior. Other examples might be given of supposed novelties merely re-

productions of similar ideas which prevailed from 50 to 100 years ago.

Another fact worthy of notice is one to which I have already referred, viz., the partial or total neglect of a remedy because it was formerly abused. This is a fashion, a very prevalent one, and probably has an injurious influence on the progress and final result of certain serious cases. I may mention for example, bleeding, alcohol, mercury, etc. Quite recently, since these remarks were written, Dr. Hare has issued an address on "Good Remedies, out of Fashion" making special reference to bleeding, emetics, opium and others.

Lastly there is undoubtedly in the present day a tendency to the rapid multiplication of remedies, many of them of very questionable value. As a natural consequence much disappointment ensues both on the part of doctor and patient. A change within reasonable limits in the method of treating disease is sometimes desirable and if carefully regulated and carried out it acts as a kind of stimulant in scientific investigation; but there should not be so much irrational fascination for everything that is new. As physicians and surgeons it is not judicious to be too anxious to change our old therapeutic garments for a new suit, which although very striking at the first glance becomes on more careful inspection deceptive, frightful or even dangerous. What for instance is known in

a satisfactory manner of Adonis, Apiol, Coto, Erio-dyction, Boldo, of the Chaulmoogra or Ndilo oils, of Nitro-Glycerine, Guarana, Damiana or Jequirity? or of those substances known as the American eclectic remedies? With certain exceptions it would be "far better for us to use the drugs we have than fly to others that we know not of." I strongly suspect we should be more successful in the treatment of disease were we to diminish the number of remedies and ignore every new theory until it has been abundantly proved to be correct. Moreover we should do well to employ those with the action of which we are familiar and concerning which there is a general agreement.

What can be more unsatisfactory than a prescription containing some fifteen to twenty ingredients? Some two or three years ago I heard a gentleman speaking of the great value of the following combination in typhoid fever, viz. aconite, digitalis, nux vomica, belladonna, and alcohol. Surely no treatment could be more unsatisfactory. It must terminate in scepticism. One extreme generally leads to that which is diametrically opposed to it, and the use of an extravagant number of remedies is certain to be followed by general disbelief in, and rejection of all medicines. Hence it is that the expectant method has been adopted by many practitioners. This is no doubt a serious error into which there is a strong ten-

dency to fall in these days. Notwithstanding in the majority of instances by the cautious use of a few well tried remedies, it is possible to render material assistance to Dame Nature in the maintenance and repair of her noblest master-piece.

In many, not all, of the medical fashions there is much intrinsic good before they arrive at the "fashionable" stage but when once they create anything like infatuation, (whether in the matter of treatment or causation) it is highly probable that their beneficial influence is fast on the wane.

What then is the best and only trustworthy safeguard against these allurements of fashion? Experience, well-matured experience. It is fortunate that from time to time some of the leaders of the profession, to wit, Sir W. Jenner, Mr. Savory, and lately Dr. Hare, venture amidst the prevailing tendencies, to raise the arm of the semaphore to caution, or even to danger, and cry out to the mass of the profession "halt." Pause for a while—whither are all these fascinations leading? Are you quite sure of your new ground? Are there no pit falls or obstructions before you? Is the atmosphere perfectly clear and are you in the right direction? Have you thoroughly examined all the strata on which you are making your permanent way? And are you thoroughly satisfied that you are resting on a solid foundation? You may be safe and the direction of your path may be judiciously selected, still it would be wiser

to travel a little more cautiously, and not to place implicit reliance on every light you see flickering in the distance before you.

To such prominent and able men all earnest active practitioners are greatly indebted for a few well-chosen words of candid and honest criticism. But there are many medical men in this country who have long passed the meridian of life, witnessed the rise and fall of many theories and popular remedies, and are still living to assist their younger brethen with that calm deliberative power which can only come after the lapse of many years.

The valuable school of experience in which they have long and efficiently laboured enables them to form a fairly correct opinion of this or that novelty, and thus indicate to their juniors a just estimate of its true value. It is absolutely necessary to be on our guard against the fascination of the dazzling but oftentimes transient scintillations of so-called scientific novelties. And though it would be unwise to ignore them or turn away from them hurriedly without careful examination, it is well not to be too eager to entertain any new ideas until they have been well sifted and corroborated by experience. Thus without passing over the utility or even necessity of constant revision we shall be able to estimate the importance of any novelty, real or apparent, which has obtained a fictitious value through the dogmatic assertions of misguided enthusiasts.

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